1   38. (New) The ATM node of claim 37, wherein the cell merging apparatus is further configured to is

2   further configured to insert the third ATM cell into an outgoing cell stream so as to avoid cell out-of-

3   order transmission within the cell stream.

1   39. (New) The ATM node of claim 38, wherein the cell merging apparatus is further configured to

2   avoid cell out-of-order transmission within the cell stream by inserting the two or more partially

3   filled ATM cells into the cell stream and before a fully packed cell when VPIs/VCIs of the two or

4   more partially filled ATM cells and a VCI/VPI of the fully packed ATM cell match.

1   40. (New) The ATM node of claim 37, wherein the cell merging apparatus is further configured to

2   construct the third ATM cell so that the third ATM cell includes information indicative of a merging

3   method used.

1   41. (New) The ATM node of claim 37, wherein the cell merging apparatus is further configured to

2   construct the third ATM cell so that the third ATM cell includes information indicative of a padding

3   method used for the partially filled ATM cells.

1   42. (New) The ATM node of claim 41, wherein the cell merging apparatus is further configured to

2   construct the third ATM cell so that the third ATM cell includes information indicative of a merging

3   method used.

REMARKS

Following entry of the above amendments, consideration of this application on the merits is

respectfully requested. The above amendments find support in the specification as originally filed,

for example at page 9, lines 5 – 6. No new matter is added by these amendments.

This amendment is submitted following a Final Decision on Appeal, dated August 27, 2002.

That decision upheld the rejection of the claims under 35 USC 102(b) in view of Takashima et al.,

U.S. Patent 5,509,007, but reversed the rejection of the claims under 35 U.S.C. 112, first paragraph.

In so far as the Final Decision on Appeal addressed claims 21, 22 and 26, that decision is now moot

inasmuch as the subject claims have been cancelled. Thus, the only issues to be addressed are the rejections of the claims in light of Takashima.

The present claims are patentable over Takashima. Takashima discloses the merging of two or more ATM cells into a new ATM cell (e.g., at Fig 15 and the accompanying description), but provides no teaching or suggestion of including information indicative of a padding method used for one of the partially filled ATM cells in the new ATM cell as presently claimed. Takashima acknowledges that some form of padding is used (see, e.g., Takashima at col. 11, ll. 5-11, discussing "dummy patterns" in the partially filled ATM cells), but does not discuss providing information indicative of the method or type of padding so used in the merged ATM cell. Such is feature is expressly recited in the present claims, and so the claims are patentable over Takashima.
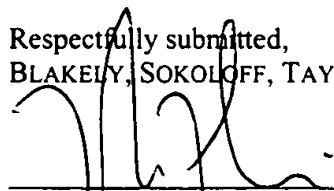
With respect to new claims 32 – 40, Takashima does not teach or suggest the use of a lookup table indexed by connection identification information indicating whether or not a connection includes partially filled ATM cells that can be merged, as recited I the claims. Instead, Takashima identifies candidate cells for merging on the basis of VPI values of ATM cells. See Takashima at col. 9, ll. 41 – 49. Thus, these claims are patentable over Takashima.

Please charge any deficiencies of fees associated with this communication to our Deposit Account No. 02-2666.

Respectfully submitted,
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VERSION OF CLAIMS WITH MARKINGS TO SHOW AMENDMENTS

1   1. (Amended) A method for merging partially filled ATM cells, comprising the steps of:

2   removing a first partially filled ATM cell from an ATM cell stream;

3   removing a second partially filled ATM cell from the ATM cell stream; and

4   merging the first partially filled ATM cell and the second partially filled ATM cell into a

5   third ATM cell having [a header that includes] information indicative of (i) a merging method used,

6   and (ii) a padding method used for the first partially filled ATM cell.

1   3. (Amended) A method for merging partially filled ATM cells as in claim 2 wherein [the] a header

2   of said third ATM cell further includes information required to reconstruct the partially filled ATM

3   cells contained within the third ATM cell.

1   14. (Amended) An ATM network, comprising:

2   a first node configured to identify partially filled ATM cells within an ATM cell stream

3   passing through the first node and to merge two or more of the partially filled ATM cells in the cell

4   stream into a merged cell the merged cell having [a header that includes] information indicative of

5   (i) a merging method used, and (ii) a padding method used for one of the partially filled ATM cells;

6   and

7   a second node coupled to the first node and configured to identify a merged ATM cells and

8   to split the merged ATM cell into two or more partially filled ATM cells.

1   24. (Amended) The method of claim 1 wherein the [header of the] third ATM cell further includes

2   information indicative of the number of partially filled ATM cells contained within the third ATM

3   cell.

1   25. (Amended) The ATM network of claim 14 wherein the [header of the] merged cell further

2   includes information indicative of the number of partially filled ATM cells contained within the third

3   ATM cell.

1   27. (New) The method of claim 1 wherein the information indicative of the merging method used

2   and the padding method used is contained within a header of the third ATM cell.

1   28. (New) The ATM network of claim 14 wherein the information indicative of the merging method

2   used and the padding method used is contained within a header of the merged cell.

1   29. (New) The method of claim 1 wherein at least one of the first or second partially filled ATM cell

2   is identified on the basis of at least one of the following indicia: a connection number, a VCI/VPI, a

3   PTI, or AAL information.

1   30. (New) The ATM network of claim 14 wherein the first node is configured to identify partially

2   filled ATM cells on the basis of at least one of the following indicia: a connection number, a

3   VCI/VPI, a PTI, or AAL information.

1   31. (New) The ATM network of claim 14 wherein the first ATM node is configured to check for a

2   match between VPIs/VCIs of waiting partially filled ATM cells and a VCI/VPI of a fully packed

3   ATM cell in the cell stream.

1   32. (New) The ATM network of claim 31 wherein the first ATM node is further configured to

2   reinsert the waiting partially filled ATM cells into the cell stream and before the fully packed cell

3   when the VPIs/VCIs of the waiting partially filled ATM cells and the VCI/VPI of the fully packed

4   ATM cell, to avoid cell out-of-order transmission within the ATM cell stream.

1   33. (New) A method, comprising identifying partially filled ATM cells within an ATM cell stream

2   according to a lookup table indexed by connection identification information indicating whether or

3   not a connection includes partially filled ATM cells that can be merged, and merging two or more of

4   the partially filled ATM cells into a fully packed ATM cell.

1   34. (New) The method of claim 33 wherein the fully packed ATM cell has a header that includes

2   information indicative of a merging method used.

1   35. (New) The method of claim 34 wherein the fully packed ATM cell further includes information

2   required to reconstruct the two or more partially filled ATM cells.

1   36. (New) The method of claim 35 wherein the fully packed ATM cell further includes information

2   indicative of the padding method used in the two or more partially filled ATM cells.

1   37. (New) An ATM node, comprising a cell merging apparatus configured to identify partially filled

2   ATM cells within a cell stream according to a lookup table indexed by connection identification

3   information, and to merge two or more partially filled ATM cells into a third ATM cell.

1   38. (New) The ATM node of claim 37, wherein the cell merging apparatus is further configured to is

2   further configured to insert the third ATM cell into an outgoing cell stream so as to avoid cell out-of-

3   order transmission within the cell stream.

1   39. (New) The ATM node of claim 38, wherein the cell merging apparatus is further configured to

2   avoid cell out-of-order transmission within the cell stream by inserting the two or more partially

3   filled ATM cells into the cell stream and before a fully packed cell when VPIs/VCIs of the two or

4   more partially filled ATM cells and a VCI/VPI of the fully packed ATM cell match.

1   40. (New) The ATM node of claim 37, wherein the cell merging apparatus is further configured to

2   construct the third ATM cell so that the third ATM cell includes information indicative of a merging

3   method used.

1   41. (New) The ATM node of claim 37, wherein the cell merging apparatus is further configured to

2   construct the third ATM cell so that the third ATM cell includes information indicative of a padding

3   method used for the partially filled ATM cells.

1   42. (New) The ATM node of claim 41, wherein the cell merging apparatus is further configured to

2   construct the third ATM cell so that the third ATM cell includes information indicative of a merging

3   method used